UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

PARUS HOLDINGS INC., Plaintiff, v. GOOGLE, LLC, Defendant.	Case No. 6:21-cv-571-ADA **JURY TRIAL DEMANDED**

PARUS HOLDING INC.'S FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Parus Holdings Inc. ("Parus" or "Plaintiff") brings this First Amended Complaint for patent infringement ("Amended Complaint") and for a Jury Trial against Google, LLC ("Google" or "Defendant"). Parus alleges as follows:

THE PARTIES

1. Plaintiff Parus Holdings Inc. is a Delaware corporation having its principal place of business at 3000 Lakeside Drive, Suite 110S, Bannockburn, IL 60015.

2. Parus is the owner by assignment of U.S. Patent No. 6,721,705 ("the '705 Patent"), U.S. Patent No. 7,881,941 ("the '941 Patent"), and U.S. Patent No. 7,386,455 ("the '455 Patent") (collectively, "the Asserted Patents").

3. Defendant Google LLC is a Delaware corporation with a principal place of business located at 1600 Amphitheatre Parkway, Mountain View, California 94043.

4. Google is registered to do business in Texas and can be served via its registered agent, Corporation Service Company dba CSC – Lawyers Incorporating Service Company at 211 East 7th Street, Suite 620, Austin, Texas 78701-3218.

5. Google maintains a permanent physical presence within the Western District of Texas, conducting business from at least its locations at: 9606 North Mo-Pac Expressway, Suite 700, Austin, Texas 78759; 500 West 2nd Street, Suite 2000, Austin, Texas 78701; 4100 Smith School Road, Austin, Texas 78744; as well as other locations in and around the Austin area.

6. Google has also recently signed a lease for an entire 35-story tower under construction at West Cesar Chavez and Nueces streets in downtown Austin, Texas.

7. Google currently employs more than 800 people in Austin, Texas.

8. Google has placed or contributed to placing infringing products, including but not limited to the Google Pixel 3, into the stream of commerce via an established distribution channel knowing or understanding that such products would be sold and used in the United States, including in the Western District of Texas. On information and belief, Google also has derived substantial revenues from infringing acts in the Western District of Texas, including from the sale and use of infringing products including but not limited to the Google Pixel 3.

9. Google had constructive notice of the Asserted Patents based on Parus's marking at least as of 2014.

JURISDICTION AND VENUE

10. This is an action for patent infringement arising under the patent laws of the United States, Title 35 of the United States Code. Accordingly, this Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

11. This Court has specific personal jurisdiction over Defendant at least in part because Defendant conducts business in this Judicial District. Parus's causes of action arise, at least in part, from Defendant's contacts with and activities in the State of Texas and this Judicial District. Upon information and belief, each Defendant has committed acts of infringement within the State of Texas and this Judicial District by, inter alia, directly using, selling, offering to sell, or importing products that infringe one or more claims of the Asserted Patents.

12. Defendant has committed acts within this District giving rise to this action and have established sufficient minimum contacts with the State of Texas such that the exercise of jurisdiction would not offend traditional notions of fair play and substantial justice.

13. Venue is proper in this Judicial District pursuant to 28 U.S.C. § 1400(b). Venue is proper for Google because (1) it has regular and established place of business in this Judicial District and (2) it has committed and continues to commit acts of patent infringement in this Judicial District by, inter alia, directly using, selling, offering to sell, or importing products that infringe one or more claims of the Asserted Patents.

BACKGROUND

14. Founded in 1997, Parus provides innovative solutions to businesses and individuals, enabling thousands of professionals to stay in touch and in control of their communications. Its patented, voice-driven applications, deep understanding of the needs and challenges of the market, and passion for unsurpassed customer service have kept Parus at the forefront of the unified communications industry for more than twenty years. Parus is a pioneer in this space, offering voice-driven unified communications and voice assistant solutions, including messaging, voice search, collaboration, presence and real-time communications for mobile communities and businesses.

15. On information and belief, Google was founded in 1996 and currently offers a variety of services and products, including, *inter alia*, search-engine services, consumer-level web-based services (*i.e.*, "Gmail"), software (including the Android operating system and Chrome browser), hardware (including the Pixel smartphone, Chromecast devices, and Nest devices), enterprise services, internet services, and other e-commerce services. *See, e.g.,* https://about.google/products/. Alphabet[1] reported $56.9 billion in revenue in the fourth quarter of 2020. *See* https://abc.xyz/investor/static/pdf/2020Q4_alphabet_earnings_release.pdf.

[1] Google was restructured with Alphabet as its parent company in 2015. Google is a wholly owned subsidiary of Alphabet. https://abc.xyz/investor/founders-letters/2015/.

16. Google has incorporated Parus's technology into its products and offerings without authorization.

THE ASSERTED PATENTS

17. The '705 Patent, '941 Patent, and '455 Patent are related and share a specification. The '705 Patent, '941 Patent, and '455 Patent relate to "robust and highly reliable" systems for users to search the internet using voice-enabled devices. '705 Patent at 1:15–16.[2] At the time of the invention, users were limited in the devices they could use to conduct web searches (*i.e.*, conventional computers, PDAs, or web-phones/web-pagers). As explained in the specification, these devices had numerous limitations, including (i) the form of the devices, their portability, and their ability to connect to the Internet; (ii) the compatibility of the devices with particular web site designs; and (iii) the devices' responsiveness to rapid changes in website content (e.g., "[t]he design of the web site may change, the information required by the web site in order to perform searches may change, and the method of reporting search results may change"). *Id*. at 1:25–2:52. Therefore, there was a need for a system that could "detect modifications to web sites and adapt to such changes in order to quickly and accurately provide the information requested by a user through a voice enabled device." *Id*. at 2:32–36.

18. Voice-enabled searches of the Internet present several unique technological hurdles. For example, unlike regular browser-based or application-based searches, a voice-enabled device must limit its results because a user simply cannot listen to an entire page worth of search results. *See id.* at 2:36–52. Voice users are especially sensitive to latency and expect immediate responses to their search requests. *Id.* Indeed, rapid responses are an essential feature of a voice system's desirability and usability. *Id*. And "[a] system that introduces too much delay between the time a user makes a request and the time of response will not be tolerated by users and will lose its usefulness." *Id*. at 2:43–46.

[2] For clarity, these citations are to the '705 Patent specification, but similar disclosures are present for each of the '941 Patent and '455 Patent.

19. The inventors of the Asserted Patents were thus presented with a technical problem: how to quickly provide complete, timely, and relevant web site search results to voice-enabled devices, accounting for the rapidly changing nature of web sites and Internet applications. '705 Patent at 2:32–26, 17:9–15. The inventors thus developed specific and concrete ways of solving the technical problems presented by voice-based internet searching, developing a robust, innovative system to provide quick, reliable results to the voice-based user that can access web sites in a ranked order in response to a voice request, and discover new web sites using, *inter alia*, content extraction, pinging, polling, and ranking. *See, e.g.*, *id.* at 6:58–7:30, 17:48–18:4, 19:3–21.

20. The claims of these patents vary in scope, and no single claim is representative of all the Asserted Patents or their claims. For example, the '705 Patent concerns how to determine from which website to retrieve information in response to a speech command from a pre-selected web site using a specific polling and ranking mechanism. *See, e.g.*, '705 Patent at 20:3–17. The '705 patent further claims a "content extraction agent," a "content descriptor," and a "content fetcher." *See, e.g.*, *id.* at 19:60–67. The specification describes and gives descriptions of these features, for example, describing a "content extraction agent" as "allow[ing] the web browsing server 102 to properly format requests and read responses provided by the web site 114;" a "content descriptor" as "direct[ing] the extraction agent where to extract data from the accessed web page and how to format a response to the user utilizing that data;" and a "content fetcher" as "retriev[ing] information from a web site." *Id.* at 7:2–28, 9:35–37.

21. For another example, the '941 Patent concerns how to determine from which website to retrieve information in response to a speech command from pre-selected web sites by sequentially accessing at least some of the pre-selected web sites. '941 Patent at 19:30–34, 20:45–48. The '941 Patent claims that the pre-selected web sites can be ranked and describes a number of ways to order those sites. *See, e.g.*, *id.* at 20:16–40, 21:1–4. The '941 Patent further claims a "content descriptor," which the specification describes, for example, as "direct[ing] the extraction agent where to extract data from the accessed web page and how to format a response to the user utilizing that data." *Id.* at 20:11–15, 20:65–67; 7:8–28.

22. For another example, the '455 Patent concerns controlling online functionality and items in a remote system using audio commands and grammar. *See, e.g.*, '455 Patent at 19:40–42. The patent further claims using polling mechanisms to determine operability. *See, e.g.*, *id.* at 16:42–65, 20:548–51.

23. Parus expects that at least some terms as used in the claims will be subject to construction in this case based on both the intrinsic record and, to the extent necessary, extrinsic evidence, including testimony from expert witnesses.

GOOGLE'S INFRINGING PRODUCTS AND SERVICES

24. Upon information and belief, Google has infringed and continues to directly infringe one or more claims of the Asserted Patents, as shown below, acting through the Android operating system, including Google Assistant, as implemented on Google devices, including Pixel devices, Nest devices, Chromecast devices, Pixelbook devices, and Fitbit devices, including but are not limited to, Google's Pixel phones, including the Pixel C, Pixel, Pixel XL, Pixel 2, Pixel 2 XL, Pixel 3, Pixel 3 XL, Pixel Slate, Pixel 3a, Pixel 3a XL, Pixel 4, Pixel 4 XL, Pixel 4a, Pixel 4a with 5G, Pixel 5 (collectively, "the Pixel Products")[3]; Google's line of Nest products, including Nest thermostats, Nest cameras, Next Hello video doorbell, Nest Secure alarm system, Google Nest Hub Max, Nest Mini, and Nest x Yale lock, including older generations of these products, such as Google Home, Google Home Mini, and Google Home Max (collectively, "the Nest Products")[4]; Google's Chromecast devices (collectively, "the Chromecast Products"); Google's Pixelbook and Pixelbook Go devices[5] (collectively, "the Pixelbook Products"); Google's Fitbit

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[3] https://support.google.com/assistant/answer/9475056?co=GENIE.Platform%3DAndroid&hl=en#:~:text=The%20new%20Google%20Assistant%20is,more%20with%20just%20your%20voice.

[4] https://support.google.com/googlenest/answer/9325085?hl=en.

[5] https://support.google.com/pixelbook/answer/9501142?hl=en#:~:text=Get%20to%20know%20the%20basics.%20First%2C%20get%20familiar,conversation%20with%20your%20Google%20Assistant%20in%20laptop%20mode.

devices (collectively, "the Fitbit Products"); Google's Stadia Controller ("the Stadia Controller"); and Google's Google Glass ("Google Glass") (collectively, "the Google Accused Products").[6] On information and belief, Google has released different versions of the Pixel Products, the Nest Products, the Chromecast Products, the Pixelbook Products, the Fitbit Products, the Stadia Controller, and Google Glass, but on information and belief, each of these products infringed through use of Google Assistant at least since Google Assistant's release in 2016.[7]

COUNT I

GOOGLE'S INFRINGEMENT OF U.S. PATENT NO. 6,721,705

25. Parus restates and incorporates by reference all of the allegations made in the preceding paragraphs as though fully set forth herein.

26. Parus is the owner, by assignment, of the '705 Patent. A true copy of the '705 Patent granted by the U.S. Patent & Trademark Office is attached as Exhibit 1.

27. Defendant Google has directly infringed, and is continuing to directly infringe, literally or under the doctrine of equivalents, at least independent claim 1 of Parus's '705 Patent by making, using, selling, and/or offering for sale the Google Accused Products, including at least the Pixel Products, the Nest Products, the Chromecast Products, and the Fitbit Products operating the Android operating system, including Google Assistant, in the United States, and operating through the Google Accused Products operating the Android operating system in violation of 35 U.S.C. § 271(a).

28. Upon filing of the complaint or shortly thereafter, Defendant Google has knowledge of the '705 Patent.

29. The Google Accused Products in conjunction with Google Assistant form an internet voice browsing system for gathering information from Web sites on the Internet. The following exemplary documents provide support to demonstrate how the Google Accused Products in conjunction with Google Assistant practice at least claim 1 of the '705 Patent: Andrew

[6] https://support.google.com/stadia/answer/9592823?hl=en.
[7] https://www.techrepublic.com/article/google-assistant-the-smart-persons-guide/.

Nusca, How voice recognition will change the world (Nov. 4, 2011), *available at* https://www.zdnet.com/article/how-voice-recognition-will-change-the-world/, Gene Munster, Will Thompson, Annual Digital Assistant IQ Test – Siri, Google Assistant, Alexa, Cortana (Jul. 25, 2018), *available at* https://loupventures.com/annual-digital-assistant-iq-test-siri-googleassistant-alexa-cortana/, Extending the assistant (Jan. 29, 2019), available at https://developers.google.com/actions/extending-the-assistant, and Voice Browsing (Jan. 29, 2019), *available at* https://www.w3.org/standards/webofdevices/voice, How Search organizes information (Jan. 29, 2019), *available at* https://www.google.com/search/howsearchworks/crawling-indexing/; *see also* https://money.cnn.com/2017/04/20/technology/google-home-voice-recognition/index.html; https://www.cnet.com/home/smart-home/every-google-assistant-command-for-your-nest-speaker-or-display; https://www.fitbit.com/global/us/technology/voice.

30. The Google Accused Products in conjunction with Google Assistant include at least one CPU-based media server. *See, e.g.*, https://support.google.com/pixelphone/answer/7157629?hl=en; https://support.google.com/pixelphone/answer/7158570?hl=en#zippy=%2Cpixel; https://support.google.com/googlenest/answer/7072284?hl=en#zippy=%2Cgoogle-nest-hub%2Cgoogle-home; https://arstechnica.com/gadgets/2018/10/google-home-hub-review-a-minimum-viable-product-with-potential; https://www.smartwatchspecifications.com/Products/fitbit-versa-3-smart-watch-specs-review.

31. The Google Accused Products in conjunction with Google Assistant include the media server having at least a speech recognition engine, a speech synthesis engine, an interactive voice response application, a call processing system, and telephony hardware, where the media server is configured to receive a speech command from a user and to convert the speech command into a digital data message and is also configured to receive a speech command from a user and to convert the speech command into a digital data message.

32. For example, Google Assistant is built-in to the Google Accused Products, including the Pixel Products, the Nest Products, and the Fitbit Products. *See, e.g.*, https://assistant.google.com/platforms/phones/; https://money.cnn.com/2017/04/20/technology/google-home-voice-recognition/index.html; https://www.cnet.com/home/smart-home/every-google-assistant-command-for-your-nest-speaker-or-display; https://www.fitbit.com/global/us/technology/voice.

33. For example, the Pixel Products with Google Assistant include both a top and bottom microphone. *See, e.g.*, https://support.google.com/pixelphone/answer/7157629?hl=en. One or more of the Nest Products and the Fitbit Products similarly include microphones and audio output devices. https://money.cnn.com/2017/04/20/technology/google-home-voice-recognition/index.html; https://www.cnet.com/home/smart-home/every-google-assistant-command-for-your-nest-speaker-or-display; https://www.fitbit.com/global/us/technology/voice.

34. The Google Accused Products in conjunction with Google Assistant are also systems for retrieving information from pre-selected web sites by uttering speech commands into a voice enabled device. For example, Google touts the Google Assistant on its web pages.

See, e.g., https://store.google.com/us/category/phones?hl=en-US.

35. For example, Google indicates that the Pixel devices in conjunction with Google Assistant will "help you find answers and control your phone and compatible smart home devices

– all with a simple squeeze or by using your voice." *See e.g.*, https://www.blog.google/products/pixel/google-pixel-3.

36. Google Assistant retrieves information from pre-selected websites that have already been crawled by the Googlebot.

> **Googlebot**
>
> Googlebot is Google's web crawling bot (sometimes also called a "spider"). **Crawling** is the process by which Googlebot discovers new and updated pages to be added to the Google index.
>
> We use a huge set of computers to fetch (or "crawl") billions of pages on the web. Googlebot uses an algorithmic process: computer programs determine which sites to crawl, how often, and how many pages to fetch from each site.

See, e.g., https://support.google.com/webmasters/answer/182072.

> The crawling process begins with a list of web addresses from past crawls and sitemaps provided by website owners. As our crawlers visit these websites, they use links on those sites to discover other pages. The software pays special attention to new sites, changes to existing sites and dead links. Computer programs determine which sites to crawl, how often and how many pages to fetch from each site.

See, e.g., https://www.google.com/search/howsearchworks/crawling-indexing/.

> Like Siri, you can ask Google Assistant general questions. Unlike Siri, you'll likely find that Google can handle a wider range of questions than Siri can. That's because Google Assistant taps into Google's web-wide search results each and every time you search, making it more comprehensive.

See, e.g., https://searchengineland.com/google-assistant-guide-270312.

37. Additionally, the Google Accused Products include call processing systems and telephony hardware, including responding to messages. *See, e.g.*, https://www.businessinsider.com/can-google-home-make-phone-calls; https://support.google.com/googlenest/answer/9465808?co=GENIE.Platform%3DAndroid&hl=en-AU.

38. The Google Accused Products in conjunction with Google Assistant include at least a database containing a list of web sites stored on magnetic media. *See, e.g.*, https://developers.google.com/search/docs/beginner/how-search-works (discussing crawling and indexing); https://www.google.com/search/howsearchworks/crawling-indexing.

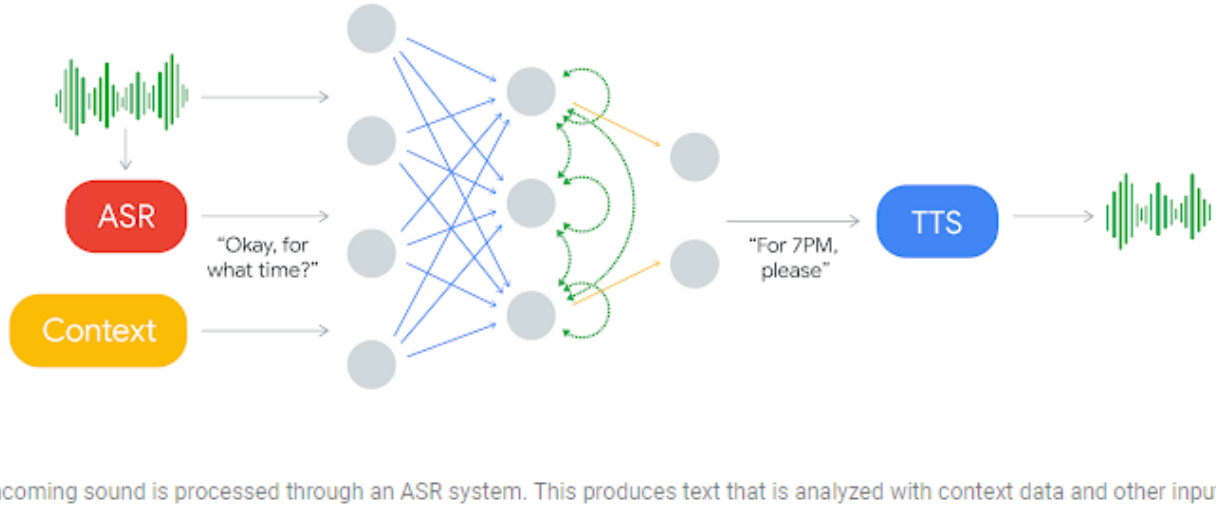
39. The Google Accused Products in conjunction with Google Assistant include a rank assigned to each one of the web sites and stored in the database. *See, e.g.*, https://moz.com/blog/how-to-rank-on-google-home (discussing "ranking for voice," "Google Home is a single-result search device, and featured snippets were designed for exactly this purpose."); https://www.google.com/search/howsearchworks/algorithms/; https://www.google.com/search/howsearchworks/crawling-indexing; *see also* https://en.wikipedia.org/wiki/Google_data_centers. In particular, Google Assistant determines ranks for each website to determine from what website to extract responses. *See, e.g.*, https://developers.google.com/assistant/howassistantworks/responses; https://pedestalsearch.com/seo-rank-google-digital-assistant.

40. For example, the Google Accused Products in conjunction with Google Assistant include a CPU-based web browsing server that includes at least a content extraction agent, a content fetcher, a polling and ranking agent, and a content descriptor file. The web browsing servers of the Google Accused Products are configured to receive a digital data message from the media server and configured to access one of the web sites having the highest rank and to retrieve information from at least one of the web sites. *See, e.g.*, https://developers.google.com/assistant/howassistantworks/responses; https://pedestalsearch.com/seo-rank-google-digital-assistant. *See also* https://moz.com/blog/how-to-rank-on-google-home ("Here's a question that should have a factual answer, but, for whatever reason, that answer is not available in Google's Knowledge Graph. So, the answer is extracted from Wikipedia and presented as a featured snippet. It's interesting to note that the answer (twelve) is pulled out of the paragraph and presented on its own...").

41. The Google Accused Products in conjunction with Google Assistant include a media server configured to generate an audio message representing the information and to transmit the audio message to a user, as discussed above. For example, the Google Accused Products in conjunction with Google Assistant can handle voice commands on the devices themselves or with help from the cloud and produce an audio response.

> Bringing the best AI experiences to Pixel 3 involved some re-thinking from the ground up. Our phones are powerful computers with multiple sensors which enable new helpful and secure experiences when data is processed on your device. These AI-powered features can work offline and don't require a network connection. And they can keep data on device, private to you. With Pixel 3, we complement our traditional approach to AI, where machine learning and data processing is done in the cloud, with reliable, accessible AI on device, when you're on the go.

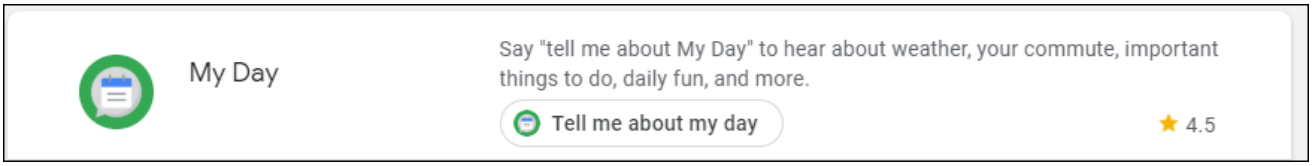
See, e.g., https://blog.google/products/pixel/pixel-3-and-device-ai-putting-superpowers-your-pocket/.



Incoming sound is processed through an ASR system. This produces text that is analyzed with context data and other inputs to produce a response text that is read aloud through the TTS system.

See, e.g., https://ai.googleblog.com/2018/05/duplex-ai-system-for-natural-conversation.html.

42. For example, the Google Accused Products in conjunction with Google Assistant can handle voice commands and generate an audio message. *See, e.g.*, https://blog.google/products/pixel/pixel-3-and-device-ai-putting-superpowers-your-pocket/; *see also* https://ai.googleblog.com/2018/05/duplex-ai-system-for-natural-conversation.html. The Google Accused Products in conjunction with Google Assistant includes said speech synthesis device configured to produce an audio message containing.



See, e.g., https://assistant.google.com/explore?hl=en_us; *see also* https://moz.com/blog/how-to-rank-on-google-home ("Google Home starts with the short answer: 'Twelve'. Then, it moves on to attribution: 'According to Wikipedia...'." "In this case, we get attribution first ('According to Universe Today...'), followed by the full snippet. Even though this snippet is fairly long, Google Home chooses to read the full contents.").

43. The Google Accused Products in conjunction with Google Assistant includes at least a polling mechanism configured to periodically send a polling digital data message to each one of the web sites and to receive a response, such that each web site becomes a polled web site. The polling mechanism in each of the Google Accused Products is configured to decrease the rank of the polled web site if no response is received from the polled web site and is also configured to decrease the rank of the polled web site if an unexpected response is received from the polled web site. The polling mechanism in each of the Google Accused Products is also configured to decrease the rank of the polled web site if a response time of the polled web site is longer than a second response time of a second polled web site.

44. For example, the Google Accused Products in conjunction with Google Assistant use a wide variety of polling mechanisms to determine the quality of a webpage and to change the rank of the site, including using polling digital data message and whether a response is received from a polled web site. *See, e.g.*, https://developers.google.com/search/docs/advanced/guidelines/cloaking; https://stackoverflow.com/questions/1878364/how-does-google-know-you-are-cloaking; https://www.google.com/search/howsearchworks/algorithms/ (Quality of content); https://developers.google.com/search/docs/advanced/guidelines/webmaster-guidelines.

45. Parus has been damaged by the infringement of one or more claims of the '705 Patent by Google. Parus is entitled to recover from Google the damages sustained by Parus as a result of Google's wrongful acts.

COUNT II

GOOGLE'S INFRINGEMENT OF U.S. PATENT NO. 7,881,941

46. Parus restates and incorporates by reference all of the allegations made in the preceding paragraphs as though fully set forth herein.

47. Parus is the owner, by assignment, of the '941 Patent. A true copy of the '941 Patent granted by the U.S. Patent & Trademark Office is attached as Exhibit 2.

48. Google has directly infringed, and is continuing to directly infringe, literally or under the doctrine of equivalents, at least independent claim 1 of the '941 Patent by making, using, selling, and/or offering for sale Google Accused Products, including the Pixel Products, operating the Android operating system, including Google Assistant, in the United States, and operating through the Pixel Products operating the Android operating system in violation of 35 U.S.C. § 271(a).

49. Upon filing of the complaint or shortly thereafter, Google has knowledge of the '941 Patent.

50. The Google Accused Products in conjunction with Google Assistant perform a method for retrieving information from pre-selected web sites by uttering speech commands into a voice enabled device and for providing to users retrieved information in an audio form via the voice enabled device. The following exemplary documents provide support to demonstrate how the Google Accused Products in conjunction with Google Assistant practice at least claim 1 of the '941 Patent: Andrew Nusca, How voice recognition will change the world (Nov. 4, 2011), *available at* https://www.zdnet.com/article/how-voice-recognition-will-change-the-world/, Gene Munster, Will Thompson, Annual Digital Assistant IQ Test – Siri, Google Assistant, Alexa, Cortana (Jul. 25, 2018), *available at* https://loupventures.com/annual-digital-assistant-iq-test-siri-googleassistant-alexa-cortana/, Extending the assistant (Jan. 29, 2019), *available at* https://developers.google.com/actions/extending-the-assistant, and Voice Browsing (Jan. 29, 2019), *available at* https://www.w3.org/standards/webofdevices/voice, How Search organizes information (Jan. 29, 2019), *available at* https://www.google.com/search/howsearchworks/crawling-indexing/;*see also*

https://money.cnn.com/2017/04/20/technology/google-home-voice-recognition/index.html; https://www.cnet.com/home/smart-home/every-google-assistant-command-for-your-nest-speaker-or-display; https://www.fitbit.com/global/us/technology/voice.

51. In providing the Google Accused Products in conjunction with Google Assistant, Google provides a computer operatively connected to the internet at least one speaker-independent speech recognition engine and at least one speech synthesis engine.

52. For example, the Google Accused Products in conjunction with Google Assistant include at least one computer. *See, e.g.*, https://support.google.com/pixelphone/answer/7157629?hl=en; https://support.google.com/pixelphone/answer/7158570?hl=en#zippy=%2Cpixel; https://support.google.com/googlenest/answer/7072284?hl=en#zippy=%2Cgoogle-nest-hub%2Cgoogle-home; https://arstechnica.com/gadgets/2018/10/google-home-hub-review-a-minimum-viable-product-with-potential; https://www.smartwatchspecifications.com/Products/fitbit-versa-3-smart-watch-specs-review.

53. Google Assistant is built-in to Google Accused Products, including the hardware and software to accept audio inputs and create audio outputs. *See, e.g.*, https://assistant.google.com/platforms/phones/; https://money.cnn.com/2017/04/20/technology/google-home-voice-recognition/index.html; https://www.cnet.com/home/smart-home/every-google-assistant-command-for-your-nest-speaker-or-display; https://www.fitbit.com/global/us/technology/voice.

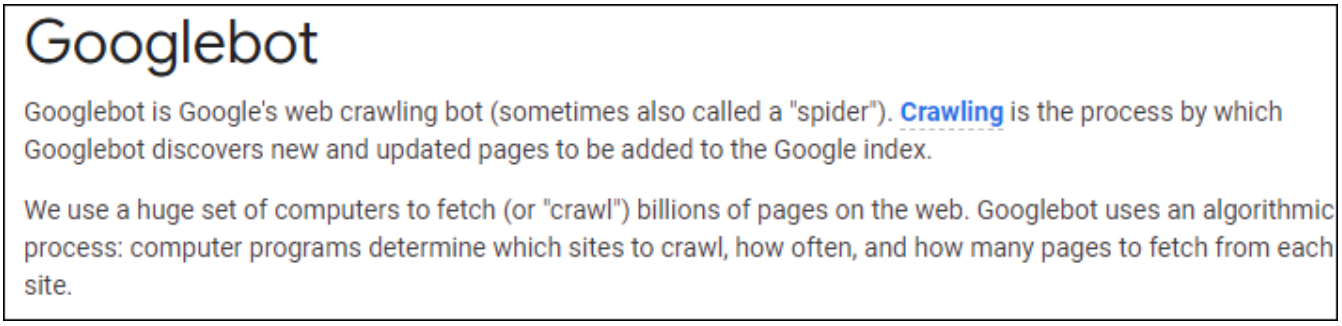
54. For example, the Pixel Products with Google Assistant include both a top and bottom microphone. *See, e.g.*, https://support.google.com/pixelphone/answer/7157629?hl=en. One or more of the Google Accused Products similarly include microphones and audio output devices. https://money.cnn.com/2017/04/20/technology/google-home-voice-recognition/index.html; https://www.cnet.com/home/smart-home/every-google-assistant-command-for-your-nest-speaker-or-display; https://www.fitbit.com/global/us/technology/voice.

55. In providing the Google Accused Products in conjunction with Google Assistant, Google provides a voice enabled device operatively connected to said computer, said voice enabled device configured to receive speech commands from users. As discussed above, the Google Accused Devices in conjunction with Google Assistant are systems for retrieving information from pre-selected web sites by uttering speech commands into a voice enabled device. For example, Google touts the Google Assistant on its web pages.

See, e.g., https://store.google.com/us/category/phones?hl=en-US.

56. For example, Google indicates that the Pixel Products in conjunction with Google Assistant will "help you find answers and control your phone and compatible smart home devices – all with a simple squeeze or by using your voice." *See, e.g.*, https://www.blog.google/products/pixel/google-pixel-3.

57. Google Assistant retrieves information from pre-selected websites that have already been crawled by the Googlebot.



See, e.g., https://support.google.com/webmasters/answer/182072.

> The crawling process begins with a list of web addresses from past crawls and sitemaps provided by website owners. As our crawlers visit these websites, they use links on those sites to discover other pages. The software pays special attention to new sites, changes to existing sites and dead links. Computer programs determine which sites to crawl, how often and how many pages to fetch from each site.

See, e.g., https://www.google.com/search/howsearchworks/crawling-indexing/.

> Like Siri, you can ask Google Assistant general questions. Unlike Siri, you'll likely find that Google can handle a wider range of questions than Siri can. That's because Google Assistant taps into Google's web-wide search results each and every time you search, making it more comprehensive.

See, e.g., https://searchengineland.com/google-assistant-guide-270312.

58. In providing the Google Accused Products in conjunction with Google Assistant, Google provides a voice-enabled device operatively connected to a computer and configured to receive speech commands from users, as discussed above.

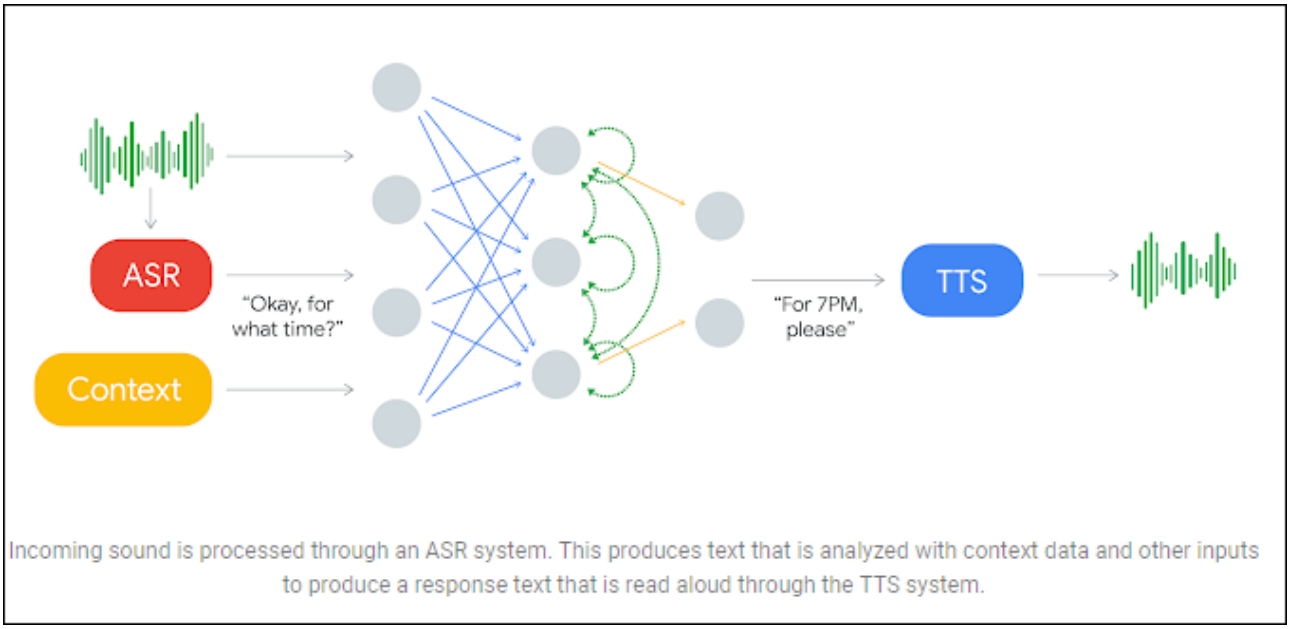
59. In providing the Google Accused Products in conjunction with Google Assistant, Google provides at least one instruction set stored in a database operatively connected to a computer, where the instruction set includes a plurality of pre-selected website addresses that each identify a website containing information to be retrieved. *See, e.g.*, https://developers.google.com/search/docs/beginner/how-search-works (discussing crawling and indexing); https://www.google.com/search/howsearchworks/crawling-indexing.

60. In providing the Google Accused Products in conjunction with Google Assistant, Google provides a speech command to said speaker-independent speech recognition engine, said speech command corresponding to said instruction set. For example, when a user states a speech command, Google provides that speech command to the speaker-independent speech recognition engine, and the speech commands correspond to some instruction set. *See, e.g.*, https://support.google.com/googlenest/answer/7072091?hl=en; https://www.cnet.com/home/smart-home/google-home-and-google-nest-link-these-weather-services-for-the-most-accurate-forecast; https://cognitiveseo.com/blog/17398/google-answer-box; https://moz.com/blog/how-to-rank-on-google-home.

61. The speaker-independent speech recognition engine in the Google Accused Products in conjunction with Google Assistant receives the speech command and selects the corresponding recognition grammar upon receiving the speech command. *See, e.g.*, https://support.google.com/googlenest/answer/7072091?hl=en; https://www.cnet.com/home/smart-home/google-home-and-google-nest-link-these-weather-services-for-the-most-accurate-forecast ("Google smart speakers and displays use data from The Weather Channel by default"); https://cognitiveseo.com/blog/17398/google-answer-box.

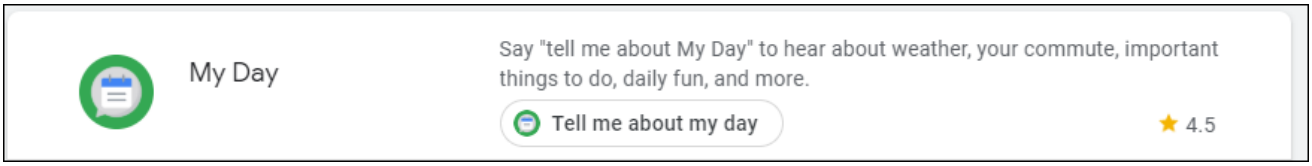
62. The computer in the Google Accused Products in conjunction with Google Assistant retrieves an instruction set corresponding to the recognition grammar selected by the speaker independent speech recognition engine, as discussed above.

63. The computer in the Google Accused Products in conjunction with Google Assistant accesses at least one of the plurality of web sites identified by the instruction set to obtain the information to be retrieved. The computer first accesses the first web site of the plurality of web sites and, if the information to be retrieved is not found at the first web site, the computer sequentially accesses the plurality of web sites until the information to be retrieved is found or until the plurality of web sites has been accessed. *See, e.g.*, https://cognitiveseo.com/blog/17398/google-answer-box; https://developers.google.com/search/docs/beginner/how-search-works (discussing "serving results" by "search[ing] the index for matching pages and return[ing] the results we believe are the most relevant to the user"); https://www.google.com/search/howsearchworks/responses.



See, e.g., https://ai.googleblog.com/2018/05/duplex-ai-system-for-natural-conversation.html.

64. The speech synthesis engine in the Google Accused Products in conjunction with Google Assistant produces an audio message containing any retrieved information from the pre-selected Web sites. *See, e.g.*, https://blog.google/products/pixel/pixel-3-and-device-ai-putting-superpowers-your-pocket/; *see also*, https://ai.googleblog.com/2018/05/duplex-ai-system-for-natural-conversation.html. The Google Accused Products in conjunction with Google Assistant includes the speech synthesis device configured to produce an audio message containing.



See, e.g., https://assistant.google.com/explore?hl=en_us; *see also* https://moz.com/blog/how-to-rank-on-google-home ("Google Home starts with the short answer: 'Twelve'. Then, it moves on to attribution: 'According to Wikipedia...'." "In this case, we get attribution first ('According to Universe Today...'), followed by the full snippet. Even though this snippet is fairly long, Google Home chooses to read the full contents.").

65. The speech synthesis engine in the Google Accused Products in conjunction with Google Assistant transmits the audio message to users via the voice enabled device, as discussed above.

66. Parus has been damaged by the infringement of the claims of the '941 Patent by Google. Parus is entitled to recover from Google the damages sustained by Parus as a result of Google's wrongful acts.

COUNT III

GOOGLE'S INFRINGEMENT OF U.S. PATENT NO. 7,386,455

67. Parus restates and incorporates by reference all of the allegations made in the preceding paragraphs as though fully set forth herein.

68. Parus is the owner, by assignment, of the '455 Patent. A true copy of the '455 Patent granted by the U.S. Patent & Trademark Office is attached as Exhibit 3.

69. Google has directly infringed, and is continuing to directly infringe, literally or under the doctrine of equivalents, at least independent claim 1 of the '455 Patent by making, using, selling, and/or offering for sale Google Accused Products, including the Pixel Products, operating the Android operating system, including Google Assistant, in the United States, and operating through the Pixel Products operating the Android operating system in violation of 35 U.S.C. § 271(a).

70. Upon filing of the complaint or shortly thereafter, Google has knowledge of the '455 Patent.

71. The Google Accused Products in conjunction with Google Assistant perform a method for controlling at least one remote system by uttering speech commands into a voice-enabled device. The following exemplary documents provide support to demonstrate how the Google Accused Products in conjunction with Google Assistant practice at least claim 1 of the '455 Patent: Andrew Nusca, How voice recognition will change the world (Nov. 4, 2011), *available at* https://www.zdnet.com/article/how-voice-recognition-will-change-the-world/, Gene Munster, Will Thompson, Annual Digital Assistant IQ Test – Siri, Google Assistant, Alexa,

Cortana (Jul. 25, 2018), *available at* https://loupventures.com/annual-digital-assistant-iq-test-siri-googleassistant-alexa-cortana/, Extending the assistant (Jan. 29, 2019), *available at* https://developers.google.com/actions/extending-the-assistant, and Voice Browsing (Jan. 29, 2019), *available at* https://www.w3.org/standards/webofdevices/voice; *see generally* https://support.google.com/googlenest/answer/7073578?hl=en; https://www.fitbit.com/global/us/technology/voice.

72. In providing the Google Accused Products in conjunction with Google Assistant, Google provides a computer operatively connected to the internet, at least one speaker-independent speech recognition engine and at least one speech synthesis engine.

73. For example, the Google Accused Products in conjunction with Google Assistant include at least one computer. *See, e.g.*, https://support.google.com/pixelphone/answer/7157629?hl=en; https://support.google.com/pixelphone/answer/7158570?hl=en#zippy=%2Cpixel; https://support.google.com/googlenest/answer/7072284?hl=en#zippy=%2Cgoogle-nest-hub%2Cgoogle-home; https://arstechnica.com/gadgets/2018/10/google-home-hub-review-a-minimum-viable-product-with-potential; https://www.smartwatchspecifications.com/Products/fitbit-versa-3-smart-watch-specs-review.

74. Google Assistant is built-in to the Google Accused Products, including the Pixel Products, the Nest Products, and the Fitbit Products, and including the hardware and software to accept audio inputs and create audio outputs. *See, e.g.*, https://assistant.google.com/platforms/phones/; https://money.cnn.com/2017/04/20/technology/google-home-voice-recognition/index.html; https://www.cnet.com/home/smart-home/every-google-assistant-command-for-your-nest-speaker-or-display; https://www.fitbit.com/global/us/technology/voice.

75. For example, the Pixel Products in conjunction with Google Assistant include both a top and bottom microphone. *See, e.g.*, https://support.google.com/pixelphone/answer/7157629?hl=en. One or more of the Nest Products

and the Fitbit Products similarly include microphones and audio output devices. https://money.cnn.com/2017/04/20/technology/google-home-voice-recognition/index.html; https://www.cnet.com/home/smart-home/every-google-assistant-command-for-your-nest-speaker-or-display; https://www.fitbit.com/global/us/technology/voice.

76. In providing the Google Accused Products in conjunction with Google Assistant, Google provides a voice-enabled device operatively connected to a computer that is configured to receive speech commands from users, as discussed above.

77. In providing the Google Accused Products in conjunction with Google Assistant, Google provides at least one instruction set stored in a database operatively connected to the computer, where the instruction set includes at least one internet address that identifies the location of at least one remote system. In the Google Accused Products, the at least one remote system is configured to execute at least one pre-selected function. *See, e.g.*, https://developers.google.com/search/docs/beginner/how-search-works (discussing crawling and indexing); https://www.google.com/search/howsearchworks/crawling-indexing; https://www.pocket-lint.com/apps/news/google/137722-what-is-google-assistant-how-does-it-work-and-which-devices-offer-it; https://support.google.com/assistant/answer/7314909?hl=en; https://www.tomsguide.com/round-up/best-google-assistant-commands; https://www.techradar.com/news/9-things-google-assistant-can-do-that-you-may-not-know-about.

78. In providing the Google Accused Products in conjunction with Google Assistant, Google provides a speech command to the speaker-independent speech recognition engine that corresponds to the instruction set. For example, when a user states a speech command, Google provides that speech command to the speaker-independent speech recognition engine, and the speech command corresponds to some instruction set, as shown in the sources cited above. *See also* https://support.google.com/googlenest/answer/7072091?hl=en; https://www.cnet.com/home/smart-home/google-home-and-google-nest-link-these-weather-

services-for-the-most-accurate-forecast; https://cognitiveseo.com/blog/17398/google-answer-box; https://moz.com/blog/how-to-rank-on-google-home.

79. The speaker-independent speech recognition engine in the Google Accused Products in conjunction with Google Assistant assigns said speech command to a recognition grammar, said speech command and said recognition grammar corresponding to said instruction set. *See, e.g.*, https://support.google.com/googlenest/answer/7072091?hl=en; https://cognitiveseo.com/blog/17398/google-answer-box; https://www.pocket-lint.com/apps/news/google/137722-what-is-google-assistant-how-does-it-work-and-which-devices-offer-it; https://support.google.com/assistant/answer/7314909?hl=en; https://www.tomsguide.com/round-up/best-google-assistant-commands; https://www.techradar.com/news/9-things-google-assistant-can-do-that-you-may-not-know-about**.**

80. In providing the Google Accused Products in conjunction with Google Assistant, Google transmits the speech command to the speaker-independent speech recognition engine. For example, when a user states a speech command, Google provides that speech command to the speaker-independent speech recognition engine, and the speech commands correspond to some instruction set., including to functions *See, e.g.*, https://support.google.com/googlenest/answer/7072091?hl=en; https://www.cnet.com/home/smart-home/google-home-and-google-nest-link-these-weather-services-for-the-most-accurate-forecast; https://cognitiveseo.com/blog/17398/google-answer-box; https://moz.com/blog/how-to-rank-on-google-home; https://www.pocket-lint.com/apps/news/google/137722-what-is-google-assistant-how-does-it-work-and-which-devices-offer-it.

81. The speaker-independent speech recognition engine in the Google Accused Products in conjunction with Google Assistant receives the speech command and selects the corresponding recognition grammar upon receiving the speech command. *See, e.g.*, https://support.google.com/googlenest/answer/7072091?hl=en;

https://cognitiveseo.com/blog/17398/google-answer-box; https://www.pocket-lint.com/apps/news/google/137722-what-is-google-assistant-how-does-it-work-and-which-devices-offer-it; https://support.google.com/assistant/answer/7314909?hl=en; https://www.tomsguide.com/round-up/best-google-assistant-commands; https://www.techradar.com/news/9-things-google-assistant-can-do-that-you-may-not-know-about**.**

82. The computer in the Google Accused Products in conjunction with Google Assistant retrieves the instruction set corresponding to the recognition grammar selected by the speaker-independent speech recognition engine. https://www.pocket-lint.com/apps/news/google/137722-what-is-google-assistant-how-does-it-work-and-which-devices-offer-it; https://support.google.com/assistant/answer/7314909?hl=en; https://www.tomsguide.com/round-up/best-google-assistant-commands; https://www.techradar.com/news/9-things-google-assistant-can-do-that-you-may-not-know-about.

83. The computer in the Google Accused Products in conjunction with Google Assistant accesses the at least one remote system identified by the instruction set to prompt the at least one remote system to execute at least one preselected function. The at least one remote system in the Google Accused Products in conjunction with Google Assistant executes the at least one pre-selected function, as discussed above.

84. Parus has been damaged by the infringement of the claims of the ’455 Patent by Google. Parus is entitled to recover from Google the damages sustained by Parus as a result of Google’s wrongful acts.

PRAYER FOR RELIEF

WHEREFORE, Parus request the Court grant the relief set forth below:

A. Enter judgment that Google has directly infringed, and continues to directly infringe, one or more claims of the ’705 Patent, ’941 Patent, and/or ’455 Patent;

B. Temporarily, preliminarily, or permanently enjoin Google, its parents, subsidiaries, affiliates, divisions, officers, agents, servants, employees, directors, partners, representatives, all individuals and entities in active concert and/or participation with them, and all individuals and/or entities within their control from engaging in the aforesaid unlawful acts of patent infringement;

C. Order Google to account for and pay damages caused to Parus by Google's unlawful acts of patent infringement;

D. Award Parus increased damages and attorney fees pursuant to 35 U.S.C. §§ 284 and 285;

E. Award Parus the interest and costs incurred in this action; and

F. Grant Parus such other and further relief, including equitable relief, as the Court deems just and proper.

DEMAND FOR JURY TRIAL

Plaintiff demands a jury trial for all issues deemed to be triable by a jury.

Dated: August 11, 2021

Respectfully submitted,

By */s/ Michael N. McNamara w/permission Andrea L. Fair*
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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing document has been served on August 11, 2021 to all counsel of record who are deemed to have consented to electronic service via the Court's CM/ECF system.

/s/ Andrea L. Fair
Andrea L. Fair